

# Murali Arkatavemula

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IT professional with 5+ years of experience which includes Cloud/DevOps Engineering, Build/Release Management, Linux administration and Cloud Management in all phases of SDLC and worked for various domains including financial, communications, healthcare and understanding the business needs of the applications.

## **PROFESSIONAL SUMMARY**

- Worked on migrating several applications running on-premise to AWS, Microsoft Azure and a Native Hybrid Cloud built using Pivotal Cloud Foundry.
- Expertise in different Kubernetes platform including EKS, Pivotal Container Service (PKS), Rancher and Azure Kubernetes Service (AKS).
- Expertise in writing Helm charts to deploy the applications in Kubernetes platforms.
- Extensively worked on integrating different AWS, PCF and Azure services to Datadog Monitoring Service.
- Experience in designing solutions for all three pillars of observability Logs, Metrics and Traces.
- Experience in Dockerizing applications written in different programming languages and writing Dockerfiles.
- Extensively worked on Jenkins and Concourse by installing, configuring and maintaining the purpose of Continuous Integration (CI) and End-to-End automation for all builds and deployments.
- Experience in designing and deploying multitude applications utilizing almost all the AWS stack (Including EC2, Route53, S3, RDS, DynamoDB, SNS, SQS, IAM) focusing on high-availability, fault tolerance, and Autoscaling in AWS CloudFormation.
- Extensively used CloudFormation to automatically to create and compose all the components necessary to run applications.
- Experience in setting up and securing the Infrastructure on AWS using IAM, KMS, CloudTrail, CloudWatch, SNS services.
- Experience in using Chef to continuously deploy pipeline for infrastructure and applications, automated testing for compliance and security, as well as dashboards and reports for troubleshooting, auditing and management.
- Experience in uploading and using the artifacts like jar files, Docker images and Helm Charts using Enterprise Jfrog Artifactory.
- Experience in branching and maintaining the version across the environments using SCM tools like Git, GitHub and Bitbucket on Linux and Windows platforms.
- Hands-on experience using MAVEN as build tool for the building of deployable artifacts (jar & war) from the source code repositories and performing static code analysis using SonarQube.
- Experience in using ELK Stack, Elasticsearch for deep search and data analytics, Logstash for centralized logging, log enrichment and parsing and Kibana for powerful and beautiful data visualizations.
- Experience in all phases of the Software development life cycle (SDLC) with focus on the build and release of quality software and good at Waterfall model, Agile Methodology (Scrum and Kanban).
- Experience in JIRA and ServiceNow for ticketing and as well as defect tracking system and configure various workflows, customizations and plug-ins for JIRA bug/issue tracker, integrated Jenkins with JIRA, GitHub, Maven.
- Proficient in Power Shell, JSON, YAML, Groovy, Bash/Shell, Python.
- Developed python, and shell scripts for automation of the build and release process.

- Experience in working with databases like MySQL and Postgres Aurora clusters and instances.
- Experience in setting up authentication for applications using both ADFS and Ping Federate services.
- Expertise in Installation, Support, Configuration with different flavors of LINUX RHEL, CentOS, Oracle Linux (OEL), Debian, and Ubuntu.

## TECHNICAL SKILLS

<b>Cloud</b>	Amazon Web Services, PCF, Microsoft Azure
<b>Container Orchestration Tools</b>	Kubernetes, EC2 Container Services, Azure Container Services,
<b>Configuration Management</b>	Chef, Ansible
<b>Version Control Tools</b>	Git, GitHub, Bitbucket
<b>Web and Application Servers</b>	Apache Tomcat, Nginx
<b>Monitoring Tools</b>	Datadog, ELK and AWS CloudWatch
<b>Bug Tracking Tools</b>	JIRA, ServiceNow, Confluence
<b>Build Tools</b>	Maven, Ant
<b>Continuous Integration</b>	Jenkins, Concourse
<b>Scripting Languages</b>	Shell, Python, Groovy, PowerShell, JSON, YAML
<b>Languages</b>	C, C++, Core Java, J2EE
<b>Database</b>	MySQL, Postgres
<b>Repository Management</b>	JFrog Artifactory
<b>Operating System</b>	Red Hat, Ubuntu, Debian, Fedora, CentOS, Windows, Solaris, Mac OS
<b>Networking Protocols</b>	TCP/IP, DNS, SMTP, BGP, UDP, HTTPS

## CERTIFICATIONS

AWS Certified Developer – Associate level (Validation Number: 831LHZCCJNFQ1EKZ)

Basic Chef Fluency

## PROFESSIONAL EXPERIENCE

**Role: Cloud Engineer**

**Fidelity Investments,**

**Merrimack, NH**

**July 2018 – Present**

**Responsibilities:**

- Working in a team, Logging and Telemetry, which provides monitoring solutions for the applications in different Cloud platforms.
- Integrated several AWS Services like EKS, RDS, EC2, ECS, Lambda, API Gateway, CloudTrail, Connect, Batch, S3, SNS, X-Ray to Datadog.
- Built various reference applications using Java Springboot and Python into Docker images for showcasing various observability features like logs, metrics and traces.
- Instrumented several reference applications with OpenMetrics and OpenTracing libraries.
- Creating Helm Charts to deploy applications into different Kubernetes platforms and used them form a Helm repository in Jfrog Artifactory.
- Collecting various kinds of metrics from the applications deployed into Pivotal Container Service (PKS) and Elastic Container Service for Kubernetes (Amazon EKS).
- Create, execute and maintain automation scripts using Python.
- Working closely with the development team and application support team to troubleshoot issues in development and production environments.

- Creating several Dashboards every day to visualize metrics, events and log streams for various cloud services and applications.
- Creating Continuous Integration and Continuous Deployment pipelines using Jenkins to run Unit tests and security scans like Veracode, SonarQube for the applications pushed into code repositories.
- Implementing Secrets Management for various cloud services like AWS ECS, AWS EKS and Pivotal Container Service (PKS) to store and retrieve information like api keys securely.
- Writing CloudFormation templates for creating IAM roles to provide and restrict access to AWS services accordingly.
- Created a pipeline that runs during the account creation process that creates an IAM role grants access to Datadog to collect the CloudWatch metrics and few Lambda functions that sends logs to Datadog and creates incidents using ServiceNow.
- Deployed CloudWatch agents and Fluentd collectors as a Daemonsets on EKS to collect container insights and logs.
- Writing several Lambda functions which gets triggered by different event sources.
- Configuring and managing an ELK stack, set up the elastic search ELK Stack to collect search and analyze logs.
- Setup Enhanced Monitoring for different RDS databases for quicker and more granular visibility into the databases.
- Automated Datadog Dashboards with the stack through Terraform Scripts and Datadog API.

**Role: DevOps Engineer**

**University of Arkansas,**

**Fayetteville, AR**

**Jan 2018 – July 2018**

**Responsibilities:**

- Utilized Cloud Watch to monitor resources such as EC2, Amazon RDS DB services, Dynamo DB tables, EBS volumes, to set alarms for notifications or automated actions, and to monitor logs for a better understanding and operation of the system.
- Configured user access and limits using AWS Identity and Access Management (IAM) by creating new profiles and policies.
- configured network infrastructure within the VPC with public and private subnets and configured routing tables and internet gateway, Security Groups in AWS.
- Wrote Terraform scripts to automate AWS services which include RDS, EC2, S3 Buckets.
- Managed multiple AWS accounts with multiple VPC's for both production and non-prod where primary objectives included automation, build out, integration and cost control.
- Maintained automated environment using Chef Recipes & Cookbooks within AWS and involved in Knife and Chef Bootstrap process.
- Worked in all areas of Jenkins setting up CI for new branches, build automation, plugin management and securing Jenkins and setting up master/slave configurations.
- Created additional Docker Slave Nodes for Jenkins using custom Docker Images.
- Used MAVEN as a build tool for Java projects and written Maven POM files from scratch for multi-module projects for the development of build artifacts on the source code.
- Created Kibana dashboards to monitor and search enterprise alerts and configured ELK stack in conjunction with AWS and using Logstash to output data to AWS S3.
- Developed PowerShell, Shell scripts, used Maven scripts to build the source code.
- Developed automation scripting in Python to deploy some applications.

**Role: Graduate Research Assistant**  
**University of Arkansas,**  
**Fayetteville, AR**  
**Responsibilities:**

**Dec 2015 – Dec 2017**

- Developed GPU compatible CUDA C code for GROMACS (GRONingen MACHine for Chemical Simulations), a molecular dynamics package primarily designed for simulations of proteins, lipids and nucleic acids.
- Involved in moving the entire simulations of GROMACS from C++ to CUDA C.
- Implemented Image Stitching on GPUs using CUDA C.
- Developed a Facial recognition system using Machine Learning with research team.
- Performed Stress testing the various components of the solutions developed.
- Used GitHub and performed Continuous Integration and Continuous Deployment using Jenkins during the entire development process.
- Responsible for writing the Release Notes, documenting all the information about the release, changes implemented in current release and defects fixed and Involved with development teams to support simultaneous updates.

**Role: Linux Administrator**  
**SVDC,**  
**Proddatur, Andhra Pradesh, India**  
**Responsibilities:**

**May 2014 – July 2015**

- Administered RedHat Enterprise Linux 5.x/4.x, OEL 5.x, & Solaris 9 Servers by testing, tuning, upgrading, patching and troubleshooting both Physical & Virtual server problems.
- Used Veritas File system and Veritas Volume Manager 5.0 to configure the RAID 1 & RAID 5 Storage System for more redundancy.
- Installed and maintained regular upgrades of Red Hat Linux Servers using kickstart based network installation.
- Created Disk volumes, Volume groups and Logical volumes (LVM) for Linux operating systems.
- Installed and Configured Apache Tomcat Web Servers.
- Configured Proxy Server, DNS, FTP and DHCP servers on Red Hat Enterprise Linux and maintained system securities using IPTABLES.
- Developed Shell scripts for automation of the build and release process.
- Involved in monitoring and troubleshooting Network like TCP/IP, NFS, DNS and SMTP in Linux servers and System Activities like CPU, Memory, Disk and Swap space usage to avoid any performance issues.
- Responsible for setting up Cronjobs scripts on servers and Implementation of passwordless (SSH) authentication between servers.